

Environmental Profile

This LCA is calculated according to: ISO 14044, ISO 14040 and EN 15804

Ecochain v3.5.64



Product: 3053577 - SafeTech RCn PotW Pp 63x5.8 L=6 BC
Unit: 1 piece
Manufacturer: Wavin - DE - Westeregeln - verified
Address: Borrweg 10
39448 Börde-Hakel
Germany
Contact: <https://www.wavin.com/en-en>

LCA standard: EN15804+A2 (2019)
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified: Yes
Issue date: 11-08-2022
End of validity: 11-08-2027
Verifier: Martijn van Hövell - SGS Search



Wavin SafeTech RC n is a co-extruded PE-100 RC two-layer pipe with protective properties according to PAS 1075. The outer signal layer is about 10% of the standard wall thickness and is colored according to the medium - blue for drinking water, orange for gas and green for waste water.

This LCA was evaluated according to EN15804+A2. It was concluded that the LCA complies with this standard.

The LCA background information and project dossier have been registered in the online Ecochain application in the account Wavin - DE - Westeregeln - verified (2020). (☑ = module declared, MND = module not declared).

A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
☑	☑	☑	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	☑	☑	☑	☑
Product stage					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage					Benefits and loads beyond the system boundaries											
A4 Transport gate to site A5 Assembly / Construction installation process					D Reuse- Recovery- Recycling- potential											

Environmental impacts and parameters

GWP-total = EF Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF Climate Change - Land use and LU change [kg CO2 eq]; **ODP** = EF Ozone depletion [kg CFC11 eq]; **AP** = EF Acidification [mol H+ eq]; **EP-fw** = EF Eutrophication, freshwater [kg P eq]; **EP-m** = EF Eutrophication, marine [kg N eq]; **EP-T** = EF Eutrophication, terrestrial [mol N eq]; **POCP** = EF Photochemical ozone formation [kg NMVOC eq]; **ADP-mm** = EF Resource use, minerals and metals [kg Sb eq]; **ADP-f** = EF Resource use, fossils [MJ]; **WDP** = EF Water use [m3 depriv.]; **PM** = EF Particulate matter [disease inc.]; **IR** = EF Ionising radiation [kBq U-235 eq]; **ETP-fw** = EF Ecotoxicity, freshwater [CTUe]; **HTP-c** = EF Human toxicity, cancer [CTUh]; **HTP-nc** = EF Human toxicity, non-cancer [CTUh]; **SQP** = EF Land use [Pt]; **PERE** = Use of renewable primary energy excluding renewable primary energy resources used as raw materials [MJ]; **PERM** = Use of renewable primary energy resources used as raw materials [MJ]; **PERT** = Total use of renewable primary energy resources [MJ]; **PENRE** = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials [MJ]; **PENRM** = Use of non-renewable primary energy resources used as raw materials [MJ]; **PENRT** = Total use of non-renewable primary energy resources [MJ]; **PET** = Total energy [MJ]; **SM** = Use of secondary material [kg]; **RSF** = Use of renewable secondary fuels [MJ]; **NRSF** = Use of non-renewable secondary fuels [MJ]; **FW** = Use of net fresh water [m3]; **HWD** = Hazardous waste disposed [kg]; **NHWD** = Non-hazardous waste disposed [kg]; **RWD** = Radioactive waste disposed [kg]; **CRU** = Components for re-use [kg]; **MFR** = Materials for recycling [kg]; **MER** = Materials for energy recovery [kg]; **EE** = Exported energy [MJ]; **EET** = Exported energy thermic [MJ]; **EEE** = Exported energy electric [MJ]

Statement of Confidentiality

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.28E+1	5.37E-1	2.62E-1	1.36E+1	1.68E-1	5.46E+0	9.28E-2	-8.41E+0	1.09E+1
GWP-f	kg CO2 eq	1.27E+1	5.36E-1	2.15E-1	1.35E+1	1.67E-1	5.46E+0	9.28E-2	-8.38E+0	1.08E+1
GWP-b	kg CO2 eq	6.22E-2	2.47E-4	2.22E-2	8.46E-2	1.02E-4	-6.25E-3	6.97E-5	-3.17E-2	4.67E-2
GWP-luluc	kg CO2 eq	3.87E-3	1.96E-4	2.50E-2	2.90E-2	5.93E-5	9.41E-4	1.33E-6	-1.91E-3	2.81E-2
ODP	kg CFC11 eq	6.60E-7	1.18E-7	2.82E-8	8.06E-7	3.86E-8	1.23E-7	1.98E-9	-4.02E-7	5.67E-7
AP	mol H+ eq	4.77E-2	3.11E-3	1.28E-3	5.21E-2	9.54E-4	5.15E-3	4.72E-5	-2.32E-2	3.50E-2
EP-fw	kg P eq	2.13E-4	5.41E-6	4.89E-6	2.23E-4	1.38E-6	2.72E-5	6.13E-8	-1.04E-4	1.47E-4
EP-m	kg N eq	7.98E-3	1.10E-3	2.62E-4	9.34E-3	3.41E-4	1.50E-3	3.34E-5	-4.24E-3	6.97E-3
EP-T	mol N eq	8.90E-2	1.21E-2	2.64E-3	1.04E-1	3.76E-3	1.65E-2	1.92E-4	-4.72E-2	7.70E-2
POCP	kg NMVOC eq	4.24E-2	3.45E-3	7.60E-4	4.66E-2	1.08E-3	5.21E-3	7.52E-5	-2.20E-2	3.10E-2
ADP-mm	kg Sb eq	1.24E-4	1.36E-5	6.35E-6	1.44E-4	4.33E-6	2.04E-5	4.74E-8	-5.41E-5	1.15E-4
ADP-f	MJ	4.51E+2	8.09E+0	2.53E+0	4.61E+2	2.57E+0	1.63E+1	1.45E-1	-2.51E+2	2.29E+2
WDP	m3 depriv.	9.83E+0	2.89E-2	1.45E+0	1.13E+1	7.89E-3	3.21E-1	6.62E-4	-4.88E+0	6.75E+0
PM	disease inc.	4.46E-7	4.81E-8	1.14E-8	5.06E-7	1.51E-8	8.47E-8	9.93E-10	-1.83E-7	4.23E-7
IR	kBq U-235 eq	3.80E-1	3.39E-2	6.80E-3	4.21E-1	1.12E-2	4.92E-2	6.74E-4	-1.52E-1	3.30E-1
ETP-fw	CTUe	8.21E+1	7.21E+0	6.21E+0	9.55E+1	2.09E+0	1.85E+1	1.27E-1	-3.65E+1	7.98E+1
HTP-c	CTUh	3.39E-9	2.34E-10	2.31E-10	3.85E-9	7.43E-11	2.20E-9	3.51E-12	-1.74E-9	4.39E-9
HTP-nc	CTUh	8.03E-8	7.89E-9	5.95E-9	9.41E-8	2.49E-9	2.78E-8	8.10E-11	-3.88E-8	8.57E-8
SQP	Pt	1.72E+1	7.01E+0	2.43E-1	2.45E+1	2.20E+0	1.30E+1	3.71E-1	-7.98E+0	3.21E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.35E+0	1.01E-1	1.35E+1	2.09E+1	3.69E-2	8.06E-1	5.72E-3	-3.63E+0	1.81E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.35E+0	1.01E-1	1.35E+1	2.09E+1	3.69E-2	8.06E-1	5.72E-3	-3.63E+0	1.81E+1
PENRE	MJ	4.83E+2	8.58E+0	2.70E+0	4.95E+2	2.73E+0	1.74E+1	1.53E-1	-2.71E+2	2.44E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	4.83E+2	8.58E+0	2.70E+0	4.95E+2	2.73E+0	1.74E+1	1.53E-1	-2.71E+2	2.44E+2
PET	MJ	4.91E+2	8.69E+0	1.62E+1	5.15E+2	2.77E+0	1.82E+1	1.59E-1	-2.75E+2	2.62E+2
SM	kg	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0
FW	m3	1.49E-1	9.85E-4	3.43E-2	1.85E-1	2.91E-4	9.43E-3	1.79E-4	-7.46E-2	1.20E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	6.10E-5	2.05E-5	4.08E-6	8.55E-5	6.58E-6	2.66E-5	1.74E-7	-7.39E-5	4.50E-5
NHWD	kg	4.21E-1	5.13E-1	5.13E-3	9.39E-1	1.59E-1	8.02E-1	6.37E-1	-2.05E-1	2.33E+0
RWD	kg	4.08E-4	5.31E-5	9.76E-6	4.71E-4	1.75E-5	6.23E-5	9.45E-7	-1.41E-4	4.11E-4
CRU	kg	0	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0	0
EE	MJ	0	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0	0



Ecochain Technologies BV
H.J.E. Wenckebachweg 123, 1096 AM Amsterdam, The Netherlands
<https://www.ecochain.com>
+31 20 3035 777